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ABSTRACT

Theories and research findings relating to the development, treatment, and effects of communication apprehension (CA) are presented in this paper. The first section, which traces the etiology and development of CA, posits a relationship between environment, personality constellations, and CA. A section on treatment of CA reviews and compares three ways in which CA among adults and children is currently being treated: systematic desensitization, cognitive restructuring, and cognitive modification. The final section notes the effects of CA in the classroom and presents findings regarding correlations between CA and intelligence, achievement, attitudes, and behavior patterns. (GT)

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ANALYZING THE DEVELOPMENT, TREATMENT, AND EFFECTS OF COMMUNICATION APPREHENSION

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Abstract

This paper examines theory and research in the development, treatment, and effects of communication apprehension (CA). An interaction between environmental and hereditary factors is posited in explaining the development of CA. The cognitive modification approach for treating CA is discussed, and possible effects of CA on children are explored.

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ANALYZING THE DEVELOPMENT, TREATMENT, AND EFFECTS OF COMMUNICATION APPREHENSION

The purpose of this paper is to discuss possible aspects of the development, treatment, and effects of communication apprehension (CA). CA is defined as an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons (McCroskey, 1977a). In the field of communication, the term CA subsumes a number of other labels including "stage fright" (cf. Clevenger, 1959), "speech anxiety" (cf. Giffin & Bradley, 1969), "reticence" (cf. Phillips, 1968; Phillips & Metzger, 1973), "audience sensitivity" (cf. Paivio, 1964), "social withdrawal" (cf. O'Connor, 1969, 1972), and "shyness" (cf. Zimbardo, 1977). These terms reflect the same basic component: a fear of communication situations which goes beyond the amount normally expected. Individuals with high communication apprehension not only experienced more than the normal stage fright behaviors during public speaking, they also experience problems in communicating in small groups and in interpersonal transactions. Because these individuals anticipate negative feelings and outcomes from communication, they either avoid communicating, if possible, or experience anxiety feelings when forced to communicate (McCroskey & Wheeless, 1979).

The nuclear conceptualization, a fear of communicating leading to withdrawal, has been investigated by and is relevant to a number of fields other than communication, including counseling, education, educational psychology, psychiatry, and psychology (cf. Berecz, 1968; Bornstein, Bellack, & Hersen, 1977; Kagan & Moss, 1962; O'Connor, 1969, 1972; Patterson, 1964; Paul & Shannon, 1966; Robinson, Vitale, & Nitsche, 1962; Twentyman & McFall, 1975; Zimbardo, 1977). While the designation "communication apprehension" is used throughout this paper, it should be stressed that the concept itself is multidisciplinary. Researchers would, therefore, benefit from a pluralistic stance when investigating the development, treatment, and effects of communication apprehension.

The term CA as used in this paper can be further defined as trait CA: an unreasonable, unjustified level of fear or apprehension about almost all communication encounters. State CA, on the other hand, is defined as a transitory emotional state specific to a given situation, such as talking to your boss (cf. McCroskey, 1977a; Spielberger, 1966; Lamb, 1973). Stage fright is another example of this acute form of oral communication apprehension. Zimbardo (1977, p. 14) describes individuals who experience temporary discomfort or fear in certain situations as being "situationally shy." This is essentially the same as state CA. State CA is in no way pathological, and is normally experienced by most people in differing oral communication situations (McCroskey, 1977a). Indeed, occasional high levels of state CA might actually be beneficial to the individual in preparing for and entering into certain communication situations.

ETIOLOGY AND DEVELOPMENT OF CA

In order to more fully understand communication apprehension, and to explore possible alternatives in treatment, the causes and development of CA need to be considered. Nevertheless, little work has been done to actually isolate the causes of CA, and most of what has been written is a mixture of theory and conjecture.

CA as a Conditioned Response

McCroskey and Wheeless (1979) have proposed that CA is produced in the individual by the conditioning aspect of the environment in which he/she grows and matures. They suggest that "the best explanation for the existence of the communication apprehension syndrome is one of 'patterned conditioning' ...If a child is not reinforced for communicating with his or her parents, peers, or teachers, it is likely that the child will develop communication apprehension" (p. 88).

McCroskey (1977a) has also noted that the child's experiences in school are likely to strengthen the CA response. The child who enters school with a high level of CA will not be able to communicate effectively, and will therefore receive little or no reinforcement for communication. The child may, however, be reinforced for being quiet at the appropriate time, and this may provide additional reinforcement for the child's withdrawal behavior.

Porter (1978) discusses the need for research which explores the etiology of CA, and presents an excellent review of studies which have been done relevant to the environmental causes of CA. He then concentrates his study on the relative effects of preschool and elementary school experiences in causing, or predicting, CA. It would seem quite likely that traumatic or negative communication experiences occurring during the early school years could cause CA. If adults with high CA can recall significant events from their early childhood, this may be helpful in explaining the causal paths of CA. Unfortunately Porter's study falls short of actually testing the relationship between experiences and the development of CA. The instrument used in this study does not ask for recall of significant experiences, but rather it "requires the respondent to analyze their self; i.e., the communicative aspects of their behavior" (Porter, 1978). Actually, it is doubtful that recall of traumatic or negative communication experiences can be stimulated and measured by the use of Likert items. All that can be stated at this point in time is that young adults today whose self-reports indicate high CA can remember (significantly) having had behaviors in elementary school and preschool that are considered indicative of CA. This may be an artifact of projection. However, the importance of early experiences cannot be denied, and further research is definitely indicated in this area.

A great deal more could be (and has been) said in support of the environmental/experiential determinants of CA. While this author does not deny the importance of these factors, there is an alternative, perhaps more comprehensive, viewpoint. While most CA researchers have concentrated on the environmental causes of CA, the concept of interaction is considered the most cogent today in the field of developmental psychology (cf. Endler, Boulter, & Osser, 1976). According to this conception, all behavior is the product of interactions between hereditary and environmental factors. Some authors have gone so far as to state that hereditary factors are the primary determinants of behavior. Maria Montessori (1912), one of the early supporters of the hereditary viewpoint, stated that "Environment is undoubtedly a secondary factor in the phenomena of life, it can modify in

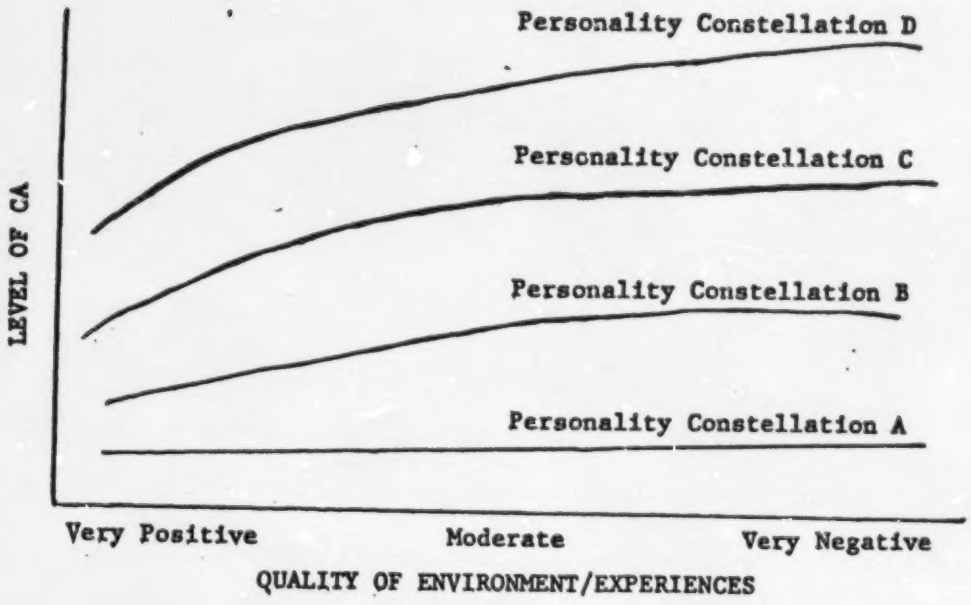
that it can help or hinder, but it can never create" (p. 105). It is the opinion of this author, however, that the relative importance of heredity and environment differ among individuals and across time. It is important to realize that neither personality characteristics nor experiences are a have or have-not situation; they are continuous, not categorical, variables. Therefore, an interaction can be posited between the level of predisposition toward CA (heredity) and the degree of experiences (environment).

In order for this posited interaction to be viable, it must be shown that personality traits can be hereditary, and furthermore, that these traits can be related to the development of CA. Freedman (1974, 1979) explains what is meant by a genetic basis of behavior. If a behavioral trait has a genetic basis then it is probably polygenic; the result of the contribution of many genes. Genetically influenced behavioral traits, however, are open to the influence of the environment. Freedman (1979) explains that there are "limits to the way that a given trait responds to the environment, and this range of constraint imposed by the genes is called a reaction range" (p. 39). Even the most powerful environmental influences can produce little change in certain genotypes, whereas other genotypes are easily influenced by the environment.

Several researchers have provided evidence for genetic determinants of behavior (cf. Endler, Boulter, & Osser, 1976; Freedman & Keller, 1963; Gottesman, 1974; Thomas, Chess, & Birch, 1970). Longitudinal, anterospective research has examined the nature of constitutional temperamental differences in newborn babies and their interactions with environmental influences in personality formation (cf. Chess, Thomas, & Birch, 1967; Thomas, Chess, & Birch, 1970). This research has been able to identify nine stable personality characteristics, measurable as early as birth or three months. The characteristics are: activity level, adaptability, approach-withdrawal, distractibility, intensity of reaction, persistence and attention span, quality of mood, rhythmicity, and sensory threshold. These characteristics can be measured in distinct combinations, referred to as "personality constellations."

A comparison of the nine characteristics of temperament observed by Thomas, et al. (1970) and the terms used by McCroskey, Daly, and Sorensen (1976) and by McCroskey (1977a) to describe individuals with high CA provides interesting results, as the terms appear very similar in nature and meaning. Highly apprehensive individuals have been described as: introverted, resistant to change, aloof, cautious, easily annoyed, quiet, reserved, rigid, shy, slow, stiff, strongly affected by emotions, tense, withdrawn, and as a worrier. Thus it may be that many of the characteristics of highly apprehensive individuals are present at birth or shortly thereafter, and are not caused totally by the conditioning aspects of environmental factors.

The relationship between inherited personality constellations (genotypes), environment, and CA may seen in the following figure.



As can be seen in this figure, certain personality constellations, i.e.; C and D, result in a predisposition for CA at birth;, this predisposition can be strongly affected by negative communication experiences and/or environments. Personality constellation D might include characteristics such as: low activity level, low adaptability, introversion, high withdrawal, intense fear reaction, and depressive moods. Personality constellation A might include such characteristics as: high activity level, high adaptability, extroversion, low withdrawal, less intense fear reactions, and a more genial quality of mood. Constellations B and C would fall between the characteristics of A and D. A personality constellation such as A or B would not indicate a predisposition for communication apprehension (quite the reverse), and it would take extremely negative experiences to induce high CA. CA research at this time has quite likely focused on individuals with personality constellations such as C and D.

At this point, the relationship between personality constellations, environment, and CA is hypothetical, though supported by related research. It does explain why the same experience can be viewed as traumatic by one person, but have little effect on another. Longitudinal or cohort analysis studies would be quite helpful in understanding the importance of environment and heredity in the etiology and development of CA.

Parent-Child Relationships

Several CA researchers have noted their importance of parents and the family (from a reinforcement perspective) in the development of CA.

However, other researchers have suggested that parent-child interactions are bidirectional; that parents and children condition each others behavior (Bell, 1968; Chess, Thomas, & Birch, 1967; Freedman, 1979). Chess, et al. (1967) explain that "parental attitudes and practices are usually selective and not global, with differential characteristics in different areas of the child's life and with marked variability from child to child... parent-child interactions should be analyzed not only for parental influences on the child but just as much for the influence of the child's individual characteristics on the parent" (p. 321). As early as the first days of infancy the child's behaviors influence the parents, and concurrently, parent behaviors influence the functioning of the child. Primary personality factors in the infant or child combine with factors in the environment which in turn influence infant behaviors; hence the interaction conception. This may explain why some children have higher (or lower) CA levels than other children in the same family, a fact which McCroskey (1977a) is unable to explain from a strictly environmental prespective.

Indeed, it has not yet been determined whether it is the lack of parental encouragement and reinforcement which causes CA, or if temperamental characteristics of the child lead to fewer and less effective attempts to communicate, thereby precluding the possibility of a great deal of positive reinforcement. It is apparent that certain environments may be more likely to intensify the development of CA than others. Yet, we must not overlook the possibility of a predisposition towards oral CA in the personality constellations of some children. Other factors, such as modeling and social learning, may also be involved and should be investigated (cf. Bandura, 1977; Evers & Schwarz, 1973; Meichenbaum & Cameron, 1974; (O'Connor, 1972). A great deal of research is needed before a definitive stand can be taken on an issue as complex as the etiology of communication apprehension.

One thing we do know about the development of CA is that it appears to get worse as the child gets older, as supported by several studies which show an increase in CA from grade to grade in elementary school (J. Garrison & K. Garrison, 1979; Shaw, 1966; Wheeless, 1967). This indicates the importance of early and effective intervention, which is discussed in the following section.

TREATMENT OF CA

The prevalance of communication apprehension as a "communication disorder," and the need for treatment, have been well documented. Research has indicated that at least 10 percent of the college student population and 11 percent of the elementary student population have severe CA, which interferes to a major extent with communication (J. Garrison & K. Garrison, 1979; Wheeless, 1971). An additional 20 to 30 percent have sufficient apprehension to warrant special treatment outside of the classroom environment. This section reviews and compares three ways in which CA among adults and children is currently being treated: systematic desensitization, cognitive restructuring, and cognitive modification.

Systematic Desensitization

Systematic desensitization (SD) has been widely and successfully used as a treatment for anxieties, fears, and phobias by researchers in several disciplines (cf. Ashem, 1963; Berecz, 1968; Davison, 1966; Gelder, Marks, Wolff, & Clarke, 1967; Hilgard & Bower, 1975; Lang & Lazovik, 1963; Lang, Lazovik, & Reyonlds, 1965; McCroskey, 1970, 1972; Paul & Shannon, 1966; Rachman, 1965, 1966; Wolpe, 1958, 1961). SD is used to relieve (extinguish) as individual's severe anxieties or phobias regarding some situation or action. SD can be described as a toleration-plus-counter-conditioning technique, with the basic concept being that relaxation and anxiety are incompatible - the relaxation response "reciprocally inhibits" fear (Hilgard & Bower, 1975; Wolpe, 1958, 1961).

The procedure. A primary hierarchy and an alternative hierarchy of fear arousing items are constructed by having the individual (often in conjunction with an SD leader or a therapist) generate a list of situations and then rate them according to how much anxiety they arouse. Next, the individual is taught the techniques of deep muscle relaxation; how to relax all muscles completely, and how to get the relaxation under nearly immediate verbal or physical control. While deeply relaxed, the individual begins (under the direction of an SD leader) imagining the consecutive situations in the hierarchy, beginning with the least fear arousing item. The individual moves on to the next item only if the relaxation can be maintained while imagining herself/himself in that situation. A single item may be repeated several times, or if the individual "blocks" (cannot remain relaxed) on a given item, an equivalent or slightly lower item from the alternative hierarchy may be used.

When the individual has completed or nearly completed the hierarchy, the level of apprehension about the situation or action should be significantly reduced. It is often recommended that the individual next go through a series of graded real-life situations similar to those listed in the hierarchy (Wolpe, 1958, 1961). Paul and Shannon (1966) and McCroskey (1972) offer a detailed explanation of the SD procedure.

Group SD. Lazarus (1971) adapted Wolpe's SD technique for use in group treatment. Paul and Shannon (1966), demonstrated that group SD was highly effective in alleviating interpersonal performance anxiety, which they operationalized as the public speaking situation. McCroskey (1970, 1972) adapted this procedure for use in treating high CA among college students. SD has consistently been found to be significantly effective for most people with high CA, but not all (cf. Goss, Thompson, & Olds, 1978; Lohr & McManus, 1975, McCroskey, 1972, 1977a; McCroskey, Ralph, & Barrick, 1970).

SD and children. Several researchers have found SD (in the original or a modified format) to be highly effective in treating anxieties, fears, and phobias among children (cf. Bentler, 1962; Costello, 1967; Lazarus &

Abramovitz, 1962; Weber, 1936). Bentler (1962) has indicated that SD may not be feasible with very young children, although she reported success with an 11 1/2 month old infant. SD alone has not been used specifically for the treatment of high CA among children.

Cognitive Restructuring

Several researchers have suggested that CA can be treated effectively by the modification of cognitions and cognitive factors associated with the anxiety (Fremouw & Harmatz, 1975; Fremouw & Scott, 1979). The technique of modifying cognitive factors is currently known as cognitive restructuring (cf. Cove, 1922; Ellis, 1963; Fedoravicius, 1972; Karst & Trexler, 1970; Kelly, 1955; Meichenbaum, 1972; Meichenbaum, Gilmore, & Fedoravicius, 1971; Weissberg, 1975; Weisberg & Lamb, 1977). Although a great deal of work has been done during the past few years, the concept itself is not new. As early as 1947, Schaffer (p. 463) defined therapy as a "learning process through which a person acquires an ability to speak to himself in appropriate ways so as to control his own conduct."

Meichenbaum & Cameron (1974) present an excellent review of the work which has been done in this area. They explain that the goal of cognitive restructuring, as a self-instructional technique, is to make the individual "aware of the self-statements that mediate maladaptive behaviors and to train them to produce incompatible self-statements and behaviors" (p. 271). Consequently, they believe that current behavior therapies, such as SD, have overemphasized the importance of environmental consequences, and thus have underemphasized or overlooked how the individual perceives and evaluates those consequences. Their research on cognitive factors in behavior modification has led them to believe that it is not the environmental consequences per se that are of primary importance, but what the individual says to herself/himself concerning the consequences. Negative, anxiety-engendering self-statements can be modified.

Cognitive Modification

Meichenbaum and Cameron (1974) indicate that the literature increasingly suggests that SD alone works well with monosymptomatic phobias, but poorly with free-floating anxiety states. Therefore, SD alone may be more effective with state CA than with trait CA. SD that included modification of cognitive factors may be more effective than SD alone with trait CA. It is interesting to note that Paul and Shannon (1966), who used SD in treating speech anxiety, included intensive group discussions with re-educative goals along with SD in their treatment program. They seem to have understood the need for a consideration of cognitive factors long before the current emphasis on cognitive factors and cognitive restructuring. However, SD programs for college students with high trait CA have typically consisted of SD alone, without the inclusion of intensive group discussions or cognitive restructuring techniques (cf. McCroskey, 1972, 1977a; Weissberg & Lamb, 1977).

The development of "cognitive modification" (CM), a technique which combines SD and cognitive restructuring, is reported by Meichenbaum (1972). He suggests that SD alone, while dealing with the "emotionality" or "arousal" component of anxiety, does not deal with the "worry" (or cognitive) component. CM, however, deals with both. This is due to the modification of the SD procedure to include a "coping" imagery procedure. The coping imagery requires the individual to visualize herself/himself becoming anxious and tense, and then handling and coping with this anxiety by means of slow deep breaths and self-instructions to attend to the task, and coping statements. Meichenbaum explains that within the standard SD procedure, there is no suggestion that following the therapy, the individual will in fact realize or experience anxiety in the real-life situation. In contrast, the coping imagery procedure requires the subject to visualize the experience of anxiety and ways in which to cope with and reduce such anxiety. The underlying assumption is that the closer the imagery is to the real-world experience, the greater the likelihood of generalization.

The procedure. The first step in the CM treatment procedure, as outlined by Meichenbaum (1972), consists of group discussions and modeled examples aimed at making the individuals aware of their thoughts, self-verbalizations, and self-instructions emitted prior to and in the anxiety-producing situation. Next, the individuals are taught to emit task-relevant self-statements, coping statements, and self-reinforcing statements, (cf. Meichenbaum & Cameron, 1974), and the techniques of deep muscle relaxation. Then the basic SD procedure (cf. Paul & Shannon, 1966) is followed, modified to include first the visualization of coping behaviors, then mastery behaviors, and finally the positive self-talk noted above. If the participants become anxious while imagining a scene, they are to visualize themselves coping with this anxiety by means of slow, deep breaths, self-instructions and coping statements. Only if the coping-imagery techniques do not reduce their anxiety are they to signal the session leader. The participant utilizes self-reinforcing statements after successfully completing visualization of the mastery behavior.

CM with children. CM has been shown to be a viable method for reducing CA among children. K. Garrison and Brown (1979) report the use of cognitive modification procedures which significantly reduce CA for fourth, fifth, and sixth grade students. Meichenbaum and Cameron (1974) report the successful use of self-instructional techniques with children suffering from various anxieties, utilizing task-relevant self-statements, self-reinforcing statements and imagery manipulations. They also present several ideas and suggestions for researchers and therapists who are interested in working with children.

Cognitive mofification compared to SD. The cognitive modification procedure (combining SD and cognitive restructuring) was found to significantly reduce test anxiety in college students, and was superior to SD alone in reducing this anxiety (Meichenbaum, 1972). Weissberg (1975) and Weissberg and Lamb (1977) have used CM as a treatment for speech anxiety and general anxiety, and have found CM to be significantly more effective than SD in reducing both. Further research should investigate the relative effects of SD and CM in treating CA among children, adolescents, and adults.

EFFECTS OF CA

CA in the Classroom

. In the early grades, the spoken word carries a large burden of instruction and must also establish a social environment that makes learning possible (National Institute of Education, 1977). Hurt and Preiss (1978) summarized the impact of communication apprehension on learning in the rationale of a recent study:

> There is little doubt that the North American educational system places great reward on verbal behavior in the classroom. Pedagogical devices such as testing, group discussions, story-telling, experimental learning and the like all demand frequent verbal output on the part of students. Out-of-class activities such as counseling sessions, and even recess, also demand verbal interaction. As a consequence, Carroll (1964), among others has noted that most learning that occurs in the school environment is verbal learning; not only the acquisition of new words for new concepts, but also the ability to verbally express the nature of concepts learned and manipulated.

CA negatively effects both the quantity and the quality of oral communication situations in which children participate.

According to Zimbardo (1977) shy students do not readily engage the teacher on a personal level, do not allow the teacher to offer the counsel and expertise he/she is ready to give, and often offer little or no feedback for the efforts the teacher is making. Communication between teacher and student is essential to learning, yet the shy, apprehensive student may have trouble in asking for and accepting assistance, and in developing an interpersonal relationship with the teacher. Additionally, teachers may not be aware of students who are suffering from a high level of CA. Recent research indicates that while teachers are able to identify apprehension in some students, they are not able to identify all students whose self-reports indicate anxiety (J. Garrison, & K. Garrison, 1979; K. Garrison, 1978). This may be due to the fact that many teachers are only aware that the child is quiet (and/or obedient) and are not sensitive to the high level of anxiety the child is experiencing. Zimbardo (1977) has indicated that those teachers who were shy as children, and those teachers who still suffer from some degree of shyness, are far more perceptive of students who experience severe shyness.

As McCroskey and Andersen (1976) note, classroom questioning aids the student in concept clarification and concept intergration, and also helps to determine the pace of content presentation. A learning environment that emphasizes voluntary student-initiated interaction with teachers, or one that evaluates students on the basis of oral performances such as giving a report, reading out loud, or participating in group discussions, penalizes the shy student who is too apprehensive to engage efficaciously in the behaviors required to achieve success (cf. Burgoon,

1975; McCroskey, 1977b; McCroskey & Andersen, 1976; McCroskey & Wheeless, 1979; Zimbardo, 1977). In such a learning environment, the shy student may fall behind, or may actually be unable to express learning which has occurred. It is also possible that a high level of apprehension interferes with the cognitive processes required for learning; high apprehension may negatively affect attention, assimilation, discovery, and other essential processes. Typically, individuals who experience a high level of CA will be perceived less positively by others in their environment than will people who experience lower levels of CA (McCroskey, 1977a). Therefore, McCroskey & Daly (1976, p. 67) hypothesized that "habitual communication behaviors of children can affect their teacher's perceptions of them and, as a result, the teacher's expectations concerning that child." They found that teachers who were given a short description of an elementary student with high CA formed negative expectations of the student, as compared to the expectations formed by teachers who were given a short description of a student with low CA. The highly apprehensive student was expected to attain lower achievement in all academic areas, and to have less satisfactory relationships with peers. However, further investigation is needed to fully understand the direction and effects of this relationship

The problem of social withdrawal and social interaction anxiety among children has frequently been articulated in the field of psychology (cf. Bornstein, Bellack, & Hersen, 1977; Kagan & Moss, 1962; Robinson, Vitale, & Nitsche, 1962). The lack of social skills appears to generate social failure, and social withdrawal in children may set the stage for inappropriate, inadequate interpersonal functioning as adults. O'Connor describes this problem:

> A child who is grossly deficient in social skills will be seriously handicapped in acquiring many of the complex behavioral repertoires necessary for effective social functioning...Such negative experiences would be expected to reinforce interpersonal avoidance responses which, in turn, further impede the development of competencies that are socially mediated. (1969, p. 15)

Communication apprehension characteristically leads to withdrawal, and social withdrawal can have debilitating and far reaching effects on childrens' present and future lives.

Correlates of CA

No correlation has been found between CA and intelligence among secondary and college students (McCroskey, Daly, & Sorensen, 1976), but substantial differences in achievement have been observed. Students with high CA, as compared to those with low CA, evidenced lower achievement on standardized tests administered at the completion of high school (McCroskey & Andersen, 1976), received lower marks in small classes in junior high (Hurt & Preiss, 1978) and in college (McCroskey & Sheahan, 1978 and attained lower overall college grade-point averages (McCroskey &

Andersen, 1976). CA does not, however, appear to be related to achievement in large lecture classes at the college level (McCroskey & Andersen, 1976). Although the underlying causal relationships are not yet understood, possible factors which influence these differences in achievement have been discussed.

The way that the high apprehensive student feels about herself/himself, and about school, might leave its mark on achievement. Several researchers have found a strong relationship between low self-esteem and high CA, and between low self-acceptance and high CA (cf. Lustig, 1974; McCroskey, Daly, Richmond, & Falcione, 1977; Snavely, Merker, Becker, & Book, 1976; Snavely & Sullivan, 1976). According to McCroskey (1977a), the studies which have focused on general personality structure and CA describe the individual with high CA as "typically an introverted individual who lacks self-esteem and is resistant to change, has a low tolerance for ambiguity, and is lacking in self-control and emotional maturity" (p. 84). A highly apprehensive sutdent who is low in self-esteem and self-acceptance, and who is negatively perceived by others, might not realize her/his maximum potential in the classroom.

A student's attitude towards school might also be related to CA. Hurt and Preiss (1978) found, in their study of junior high school students, that as the level of communication apprehension increased, the student's attitude towards school became more and more negative. As with self-esteem and self-acceptance, the causal relationship remains unclear. It is clear that CA is correlated with student behaviors in the classroom, teachers' expectations, low self-esteem and self-acceptance, students' attitudes toward school, and achievement. The why and how of these relationships remain to be investigated.

Behavioral Correlates of CA Among Children

While withdrawal from communication is the most commonly noted behavior associated with high CA, it is important to remember that all of the behavioral correlates of CA among children are not yet well known. In a recent study conducted by this author, 126 fourth, fifth, and sixth grade students were identified as high apprehensives by their scores on the Measure of Elementary Communication Apprehension (K. Garrison, 1978). Conversations with principals and classroom teachers revealed that at least 12 of these 126 students (less than 1%) were considered behavior problems within the classroom. One possible explanation is that some of these students' responses on the instrument used indicated a dislike for school rather than apprehension.

However, another possible explanation for the behavior problem of these students is worth considering. As previously noted, research has shown that high CA is negatively correlated with self-esteem, self-acceptance, and attitudes toward school. McCroskey has described the

individual with high CA as "lacking in self-control and emotional maturity" (1977a, p. 84). He has also noted that while behavioral correlates of CA do exist, they may be partially or completely confounded by other influences in any given situation. A child with high CA and therefore strong anxiety feelings, low self-esteem, low self-acceptance, who dislikes school and is lacking in self-control and emotional maturity, may indeed become a behavior problem within the school environment. Such a child may find school to be a particularly punishing, difficult experience. While for some children such feelings may result in withdrawal, for a few they may result in acting-out. This child may find it difficult to communicate, but not at all difficult to act-out. It should also be noted that aggression is a common reaction to frustration and/or anxiety, and that some young children may not have yet learned to suppress aggression. The relationships among CA and other personality characteristics also remain unclear. When trait CA is combined with differing personality characteristics in children, it is difficult to predict what the behavioral outcomes will be. Further research is needed in order to determine and fully understand the behavioral correlates of CA among children.

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